

In re Application of HENKENS et al.  
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### REMARKS

Claims 1-21 are pending in the application. Claims 17-21 have been withdrawn as directed to non-elected subject matter. Claims 1-11, 13-14 and 16 have been amended. No new subject matter has been added by virtue of these amendments and their entry is respectfully requested. Claims 12 and 15 have been cancelled without prejudice or disclaimer. Applicants hereby reserve the right to pursue the cancelled subject matter in one or more continuation or divisional applications.

#### *Claim Rejections Under 35 U.S.C. § 102*

Claim 14 is rejected under 35 U.S.C. § 102 (e) as being anticipated by Wohlstadter *et al* (Pub. No.: US 2004/00864233 A1). Applicants respectfully traverse.

In response, Applicants have amended claim 14. Amended claim 14 is directed to a battery or AC-powered portable biosensor apparatus comprising: a circuit board with a plurality of working and reference electrodes formed thereon; a plurality of nucleic acid segments attached to the surface of said plurality of working electrodes that capture nucleic acid targets by hybridization wherein each hybrid formed has one or more labels attached that catalytically enhance the current generated following hybridization;; and a monitor for measuring a current produced following hybridization of targets with the nucleic acid segments, said monitor being operably connected so that it controls the electrical potential of the electrodes and records, analyzes and displays the currents generated at the individual electrodes. Applicants have amended claim 14 solely for the purposes of responding to this office action and to compact and expedite prosecution. No new matter has been added by virtue of this amendment and its entry is respectfully requested.

Support for this amendment is found throughout the specification. See, for example: the apparatus comprises reference electrodes (see, for example, page 6, lines 25-30; page 7, lines 22-34; page 20, lines 22-33 through to page 21, lines 1-2; page 22, lines 21-34 through to page 24 lines 1-21; page 28, lines 7-33 through to page 29, lines 1-7; Examples 4.1 - 5.13); a plurality of

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nucleic acids attached thereto (see, for example, page 8, lines 13-29; page 10, lines 8-33; page 18, lines 19-33 through to page 20, lines 1-15; page 21, lines 19-33 through to page 24, lines 1-26; page 26, lines 11-32 through to page 27, lines 1-19; Examples 4.1-5.13); a means for measuring current (see, for example, page 7, lines 12-21; page 11, lines 1-15; page 18, lines 7-18; page 19, lines 29-33 through to page 20, lines 1-2; page 22, lines 9-20; page 27, lines 20-33 through to page 29, lines 1-7); battery or AC-powered (see, for example, page 54, lines 5-22); printed and screen elements (see, for example, page 28, lines 7-33 through to page 29, lines 1-7); portable (see, for example, page 19, lines 1-8). The currents produced by the hybridized electrode bound nucleic acid segments and nucleic acid target sequences when an electric potential is applied are catalytically enhanced by attached labels (see, for example, page 24, lines 3-34 through to page 26, lines 1-9; page 48, lines 24-33 through to page 49, lines 1-20).

Applicants apparatus comprises a small, portable instrument that applies potential to a working electrode and is the same instrument that transfers, records, analyzes and/or displays the currents from the individual working electrodes, such currents being independent of each other.

Wohlstadter *et al.* do not teach each and every claim limitation of the instant invention and do not teach or disclose the instant invention.

In view thereof, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 102(e) rejection as it applies to claim 14.

Claims 1-11, 13, 14 and 16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Doung *et al.* (US 2002/0177135A1).

Applicants respectfully disagree. However, in order to expedite prosecution, Applicants have amended the claims. Claim 1 of Doung *et al.* recites: a biochip cartridge comprising a) a reaction chamber comprising: i) a substrate comprising an array of electrodes, each comprising: A) a self-assembled monolayer; and B a capture binding ligand; and II, an inlet port for the introduction of reagents, and interconnects to allow the electrical connection of said electrodes to

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a processor. As such, Doung *et al.*, do not teach or disclose a portable biosensor apparatus comprising: a circuit board with a plurality of working and reference electrodes formed thereon; a plurality of nucleic acid segments attached to the surface of said plurality of working electrodes that capture nucleic acid targets by hybridization; and a monitor for measuring a current produced following hybridization of targets with the nucleic acid segments, said monitor being operably connected so that it controls the electrical potential of the electrodes and records, analyzes and displays the currents generated at the individual electrodes. Applicants submit that Doung *et al.* do not teach each and every claim limitation.

In view thereof, Applicants respectfully request reconsideration and withdrawal of the instant rejection.

#### *Claim Rejections Under 35 U.S.C. § 103*

Claims 12 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Doung *et al.* (US 2002/0177135A1) in view of Stratagene catalog 1988 page 39.

Applicants respectfully traverse. However, in order to expedite prosecution, Applicants have cancelled claims 12 and 15. The cancelled subject matter is not to be construed as surrender of subject matter. Applicants hereby, reserve the right to pursue the cancelled subject matter in one or continuation or divisional applications.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

#### CONCLUSION

Applicants respectfully request entry of the foregoing remarks and reconsideration and withdrawal of all rejections. It is respectfully submitted that this application with claims 1-16 define patentable subject matter and is in condition for allowance. Accordingly, Applicant respectfully requests allowance of these claims.

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This response is being filed with a petition for an extension of two months and the required fees. Applicants request that this submission also be considered as a petition for any extension of time if necessary. The Commissioner for Patents and Trademarks is hereby authorized to charge the amount due for any retroactive extensions of time and any deficiency in any fees due with the filing of this paper or credit any overpayment in any fees paid on the filing or during prosecution of this application to Deposit Account No. 50-0951.

If there are any remaining issues or the Examiner believes that a telephone conversation with the Applicants' attorney would be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at telephone number shown below.

Respectfully submitted,

AKERMAN SENTERFITT

Dated: August 21, 2006

  
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